

## **Quantitative Usage Analysis for Diclofop-Methyl**

Case Number: 2160      PC Code: 110902  
Date: Orig. 2-17-99; Rev.11-3-99    Analyst: Alan Halvorson

Based on available pesticide usage information mainly for 1987 through 1996, total annual domestic usage of diclofop-methyl is approximately 750 thousand pounds active ingredient (a.i.). In terms of pounds a.i., total diclofop-methyl usage is allocated mainly to Spring wheat (43%), Winter wheat (36%), barley (17%) and golf courses (2%). The sites with more than one percent of U.S. acreage currently treated are durum wheat (5%), barley (3%) and Spring wheat (2%). Average application rates are generally less than 1.0 pounds a.i. per acre, and the number of applications is generally one per year. States with significant usage include Idaho, Minnesota, North Dakota, South Dakota and Washington.

File location: f:\user\share\usage\reports QUAs\REDs\diclofo9.wpd

Diclofop-Methyl Case #: 2160 AI #: 110902 EPA's QUANTITATIVE USAGE ANALYSIS  
Analyst: Alan Halvorson Date: orig. Feb. 17, 1999, revised Nov. 3, 1999

Site	Acres (000)	Acres Trtd (000)		% Crop Treated		Lb AI Total (000)		Average Application Rates			Most-using States (% of total lb ai used on this site by these states)
	Grown	Wtd Ave	Est Max	Wtd Ave	Est Max	Wtd Ave	Est Max	lb ai/ A/year	appl/ year	lb ai/ A/appl	
Barley	7,619	204	310	3%	4%	130	243	0.6	1.0	0.6	MN ND SD ID WA 83%
Wheat, Spring	20,799	474	741	2%	4%	340	528	0.7	1.0	0.7	MN ND 83%
- Durum	2,964	156	344	5%	12%	100	232	0.6	1.0	0.6	ND 100%
- Other	17,588	181	362	1%	2%	130	260	0.7	1.0	0.7	MN 100%
Wheat, Winter	43,282	351	526	1%	1%	270	404	0.8	1.1	0.7	ID OR NC WA MT ND 67%
Golf Courses	1,578	<19	<30	1%	<2%	16	25	>0.8	-	0.8	-
Total		1,046	1,326			756	978				

#### COLUMN HEADINGS

- Weighted average--the most recent years and more reliable data are weighted more heavily.
- Est Max = Estimated maximum, which is estimated from available data.
- Average application rates are calculated from the weighted averages.

#### NOTES ON TABLE DATA

- Usage estimates are based primarily on 1987 - 1996 data.
- Calculations of the above numbers may not appear to agree because they are displayed as rounded:
  - to the nearest 1000 for acres treated or lb. a.i. (Therefore 0 = < 500.)
  - to the nearest whole percentage point for % of crop treated. (Therefore 0% = < 0.5%.)
- A dash (-) indicates that information on this site is NOT available in EPA sources or is insufficient.

#### DATA SOURCES

- CA EPA, 1993-1995 data
- Kline & Co., Professional Markets for Pesticides and Fertilizers, 1992 and 1994 data
- National Center for Food and Agricultural Policy, Feb. 1995
- Research Triangle Institute, Results of the 1993 Certified/Commercial Pesticide Applicator Survey, Aug. 1995
- US EPA, 1987-1998 proprietary data
- USDA/NASS, 1990-1997 data

Diclofop-Methyl Usage on Barley by State  
 Alan Halvorson, EAB/BEAD,10/13/99

	Acre-Trtments		Lbs AI Appld	
	(000)	(%)	(000)	(%)
NORTH DAKOTA	75	42%	49	41%
MINNESOTA	50	29%	38	32%
IDAHO	24	13%	15	13%
MONTANA	9	5%	4	3%
SOUTH DAKOTA	8	5%	6	5%
WASHINGTON	4	2%	4	3%
NORTH CAROLINA	4	2%	1	1%
SOUTH CAROLINA	2	1%	1	1%
COLORADO	1	1%	1	1%
VIRGINIA	1	0%	0	0%
TOTAL	177	100%	120	100%

Diclofop-Methyl Usage on Spring Wheat by State

	Acre-Trtments		Lbs AI Appld	
	(000)	(%)	(000)	(%)
MINNESOTA	103	39%	78	39%
NORTH DAKOTA	68	26%	49	25%
IDAHO	32	12%	24	12%
MONTANA	19	7%	17	8%
CALIFORNIA	13	5%	7	3%
OREGON	8	3%	6	3%
ARIZONA	7	3%	7	3%
WASHINGTON	6	2%	7	3%
SOUTH DAKOTA	5	2%	4	2%
COLORADO	1	0%	1	0%
TOTAL	262	100%	200	100%

# Diclofop-Methyl Usage on Winter Wheat by State

	Acre-Trtments		Lbs AI Appld	
	(000)	(%)	(000)	(%)
IDAHO	97	21%	60	20%
NORTH CAROLINA	87	19%	57	19%
WASHINGTON	77	17%	49	16%
OREGON	50	11%	38	13%
MONTANA	30	7%	18	6%
TENNESSEE	26	6%	17	5%
ARKANSAS	16	3%	9	3%
VIRGINIA	15	3%	11	4%
GEORGIA	14	3%	9	3%
CALIFORNIA	10	2%	7	2%
NORTH DAKOTA	8	2%	10	3%
TEXAS	7	2%	5	2%
MISSISSIPPI	7	1%	5	1%
SOUTH CAROLINA	7	1%	4	1%
LOUISIANA	5	1%	2	1%
MARYLAND	3	1%	1	0%
COLORADO	2	0%	2	1%
OTHERS	3	1%	2	1%
TOTAL	463	100%	303	100%

Note: Totals in above tables are different than corresponding totals in the QUA because each used different sources and/or years.

Source: EPA proprietary data, 1995-97